

1253893

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*November 29, 2004*

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APPLICATION NUMBER: 60/518,218

FILING DATE: *November 07, 2003*

RELATED PCT APPLICATION NUMBER: PCT/US04/36275

Certified by



Jon W Dudas

Acting Under Secretary of Commerce  
for Intellectual Property  
and Acting Director of the U.S.  
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PTO/SB/16 (02-01)  
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## PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (c).

Express Mail Label No. EV413351752US

17302 U.S. PTO  
60/518218



110703

| INVENTOR(S)  |   |  |   |  |  |
|--|---|--|---|--|--|
| Given Name (first and middle [if any])   | Family Name or Surname                    |  | Residence<br>(City and either State or Foreign Country) |  |  |
| Bret David<br>James Duane  | Hawkins<br>Tenbarge                       |  | Brownsburg, Indiana<br>Fishers, Indiana                 |  |  |
| <input type="checkbox"/> Additional inventors are being named on the _____ separately numbered sheets attached hereto                                |   |  |   |  |  |
| TITLE OF THE INVENTION (280 characters max)  |   |  |   |  |  |
| AUTO DISPLAY OF CHANNEL BANNER ON A PROGRAM CHANGE   |   |  |   |  |  |
| <b>CORRESPONDENCE ADDRESS</b>  |   |  |   |  |  |
| Direct all correspondence to:  |   |  |   |  |  |
| <input type="checkbox"/> Customer Number   |   | <div style="border: 1px solid black; width: 150px; height: 20px;"></div> |   | Place Customer Number<br>Bar Code Label here |  |
| OR   |   | Type Customer Number here  |   |  |  |
| <input checked="" type="checkbox"/> Firm or<br>Individual Name   | JOSEPH S. TRIPOLI, THOMSON LICENSING INC. |  |   |  |  |
| Address  | PATENT OPERATIONS.                        |  |   |  |  |
| Address  | P. O. BOX 5312                            |  |   |  |  |
| City   | PRINCETON                                 | State  | NJ  | ZIP  | 08543-5312   |
| Country  | USA                                       | Telephone  | 609-734-6834  | Fax  | 609-734-6888   |
| <b>ENCLOSED APPLICATION PARTS (check all that apply)</b>   |   |  |   |  |  |
| <input checked="" type="checkbox"/> Specification Number of Pages  |   | 3  | <input type="checkbox"/> CD(s), Number                  |  |  |
| <input checked="" type="checkbox"/> Drawing(s) Number of Sheets  |   | 3  | <input type="checkbox"/> Other (specify)                |  |  |
| <input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76   |   |  |   |  |  |
| <b>METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT (check one)</b>  |   |  |   |  |  |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.  |   |  |   |  |  |
| <input type="checkbox"/> A check or money order is enclosed to cover the filing fees   |   |  |   |  |  |
| <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number: |   |  |   | 07-0832                                      | FILING FEE<br>AMOUNT (\$)<br><div style="border: 1px solid black; padding: 2px;">160</div> |
| <input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.  |   |  |   |  |  |
| The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.              |   |  |   |  |  |
| <input checked="" type="checkbox"/> No.  |   |  |   |  |  |
| <input type="checkbox"/> Yes, the name of the U.S. Government agency and the Government contract number are: _____                                   |   |  |   |  |  |

Respectfully submitted,  
SIGNATURE

Date

11/7/03

TYPED or PRINTED NAME

Reitseng Lin

REGISTRATION NO.  
(if appropriate)

42,804

Docket Number:

PU030298

TELEPHONE 609 734-6813

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This collection of information is required by 37 CFR 1.51. The information is used by the public to file (and by the PTO to process) a provisional application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the complete provisional application to the PTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, D.C., 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Box Provisional Application, Assistant Commissioner for Patents, Washington, D.C. 20231.

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**FEE TRANSMITTAL  
for FY 2003**

Effective 01/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT (\$)** 160**Complete if Known**

|                      |                    |
|----------------------|--------------------|
| Application Number   |                    |
| Filing Date          |                    |
| First Named Inventor | Bret David Hawkins |
| Examiner Name        |                    |
| Group / Art Unit     |                    |
| Attorney Docket No.  | PU030298           |

**METHOD OF PAYMENT (check all that apply)**☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None☐ Deposit Account:Deposit  
Account  
NumberDeposit  
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☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.
**FEE CALCULATION****1. BASIC FILING FEE**

| Large Entity        |          | Small Entity |          | Fee Description        | Fee Paid        |
|---------------------|----------|--------------|----------|------------------------|-----------------|
| Fee Code            | Fee (\$) | Fee Code     | Fee (\$) |                        |                 |
| 1001                | 770      | 2001         | 375      | Utility filing fee     |                 |
| 1002                | 340      | 2002         | 165      | Design filing fee      |                 |
| 1003                | 530      | 2003         | 260      | Plant filing fee       |                 |
| 1004                | 770      | 2004         | 375      | Reissue filing fee     |                 |
| 1005                | 160      | 2005         | 80       | Provisional filing fee | 160             |
| <b>SUBTOTAL (1)</b> |          |              |          |                        | <b>(\$)</b> 160 |

**2. EXTRA CLAIM FEES**

|                    |  |    |   |   |   |                |   |   |          |
|--------------------|--|----|---|---|---|----------------|---|---|----------|
| Total Claims       |  | ** | = | 0 | X | Fee from below | = | 0 | Fee Paid |
| Independent Claims |  | ** | = | 0 | X |                | = | 0 |          |
| Multiple Dependent |  |    |   |   | X |                | = | 0 |          |

| Large Entity |          | Small Entity |          | Fee Description  | Fee Paid |
|--------------|----------|--------------|----------|--|----------|
| Fee Code     | Fee (\$) | Fee Code     | Fee (\$) |  |          |
| 1202         | 18       | 2202         | 9        | Claims in excess of 20                                     |          |
| 1201         | 86       | 2201         | 42       | Independent claims in excess of 3                          |          |
| 1203         | 290      | 2203         | 140      | Multiple dependent claim, if not paid                      |          |
| 1204         | 86       | 2204         | 42       | ** Reissue independent claims over original patent         |          |
| 1205         | 18       | 2205         | 9        | ** Reissue claims in excess of 20 and over original patent |          |

**SUBTOTAL (2)**

(\$)

\*\*or number previously paid, if greater; For Reissues, see above

**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

| Large Entity |          | Small Entity |          | Fee Description  | Fee Paid |
|--------------|----------|--------------|----------|--|----------|
| Fee Code     | Fee (\$) | Fee Code     | Fee (\$) |  |          |
| 1051         | 130      | 2051         | 65       | Surcharge - late filing fee or oath  |          |
| 1052         | 50       | 2052         | 25       | Surcharge - late provisional filing fee or cover sheet                     |          |
| 1053         | 130      | 1053         | 130      | Non-English specification  |          |
| 1812         | 2,520    | 1812         | 2,520    | For filing a request for reexamination                                     |          |
| 1804         | 920*     | 1804         | 920*     | Requesting publication of SIR prior to Examiner action                     |          |
| 1805         | 1,840*   | 1805         | 1,840*   | Requesting publication of SIR after Examiner action                        |          |
| 1251         | 110      | 2251         | 55       | Extension for reply within first month                                     |          |
| 1252         | 420      | 2252         | 205      | Extension for reply within second month                                    |          |
| 1253         | 950      | 2253         | 465      | Extension for reply within third month                                     |          |
| 1254         | 1,480    | 2254         | 725      | Extension for reply within fourth month                                    |          |
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| 1401         | 330      | 2401         | 160      | Notice of Appeal   |          |
| 1402         | 330      | 2402         | 160      | Filing a brief in support of an appeal                                     |          |
| 1403         | 290      | 2403         | 140      | Request for oral hearing   |          |
| 1451         | 1,510    | 1451         | 1,510    | Petition to institute a public use proceeding                              |          |
| 1452         | 110      | 2452         | 55       | Petition to revive - unavoidable   |          |
| 1453         | 1,330    | 2453         | 650      | Petition to revive - unintentional   |          |
| 1501         | 1,330    | 2501         | 650      | Utility issue fee (or reissue)   |          |
| 1502         | 480      | 2502         | 235      | Design issue fee   |          |
| 1503         | 640      | 2503         | 315      | Plant issue fee  |          |
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| 1807         | 50       | 1807         | 50       | Processing fee under 37 CFR 1.17 (q)                                       |          |
| 1806         | 180      | 1806         | 180      | Submission of Information Disclosure Stmt                                  |          |
| 8021         | 40       | 8021         | 40       | Recording each patent assignment per property (times number of properties) |          |
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| 1802         | 900      | 1802         | 900      | Request for expedited examination of a design application                  |          |

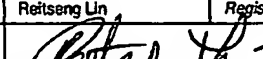
Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

**SUBTOTAL (3)**

(\$)

**SUBMITTED BY****Complete (if applicable)**

|                   |   |                                 |        |           |                  |
|-------------------|---|---------------------------------|--------|-----------|------------------|
| Name (Print/Type) | Reitseng Lin  | Registration No. Attorney/Agent | 42,804 | Telephone | 609-734-6813     |
| Signature         |  |                                 |        | Date      | November 7, 2003 |

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## AUTO DISPLAY OF CHANNEL BANNER ON A PROGRAM CHANGE

### Technical Field of Invention

- 5 This invention relates to the field of television for automatically displaying information about the next program before the ending of the current program.

### Background Art

- 10 When a current program is about to end, the user cannot tell what the next program in the same channel is without manually pressing the INFO key on the remote to bring up the program information such as channel banner or without manually entering a program guide to get the title information.

### Disclosure of Invention

- 15 According to the principles of the invention, when a television apparatus detects that a current program is ending in a predetermined time interval, the television apparatus automatically displays the program information such as channel banner or title of the next program.

- Furthermore, if a new program is received before the end of the current program, the television apparatus updates the displayed program information according to the information included in the newly received program guide.
- 20

### Brief Description of Drawings

FIG. 1 is an illustrative flow chart showing how a television apparatus displays the program information for the next program when the current program is about to end.

- 25 FIGs. 2 and 3 each show an example of a television apparatus suitable for implementing the process shown in FIG. 1.

### Detailed Description

- A television apparatus, such as a television made by Thomson Inc., Indianapolis, Indiana, can receive guide data from Gemstar or PSIP (Program and System Information Protocol) tables on ATSC (Advanced Television Systems Committee) streams. ATSC is a high definition television standards body. For illustration purposes, the PSIP data is used in the following discussion, but something similar could be done with data from Gemstar. Essentially there is data in the PSIP EIT (event information tables) which
- 30

includes start and end times of a program or time information necessary for deriving the start and end times of the program. Using this information, a television apparatus can detect that a current program is about to end in a predetermined time and pop the program information such channel banner and program title of the next program. Additionally, when the television apparatus receives an updated PSIP guide before the end of the current program, the television apparatus may display the new guide information to the user automatically. By automatically displaying this information, the user is no longer required to manually bring up the channel banner or guide to see what the next program is.

FIG. 1 illustrates the process of displaying the program information, illustratively the channel banner, of the next program before the current program ends.

FIGs. 2 and 3 each show an embodiment of a television apparatus that can be used to implement the process described in FIG. 1.

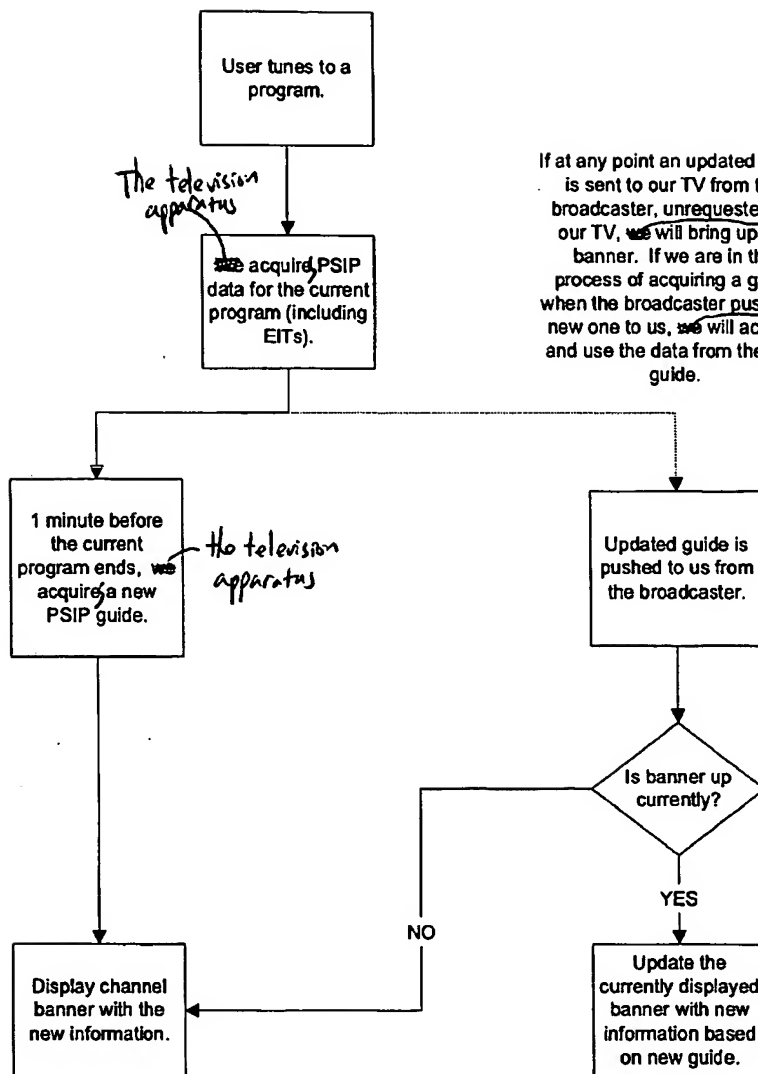
While this invention has been described with regard to a few presently preferred embodiments, those skilled in this art will readily appreciate that many alternative modes and embodiments can be carried out without departing from the spirit and scope of this invention.

## CLAIMS

What is claimed is:

1. A method for displaying information of a next program by a  
5 television apparatus before the end of a currently showing program, the  
method comprising the steps of:  
    acquiring by the television apparatus end time of the currently showing  
    program from a program guide;  
    determining by the television apparatus using the end time whether the  
10 currently showing program is ending in a predetermined time; and  
    if the currently showing program is ending within the predetermined  
time, the television apparatus displaying information of the next program.
2. A television apparatus comprising:  
    storage for storing program information for each program, including  
15 time information for each program; and  
    a controller for determining whether a currently showing program is  
ending in a predetermined time using the time information, wherein  
If the currently showing program is ending in the predetermined time, the  
controller displays information of a next program.

20

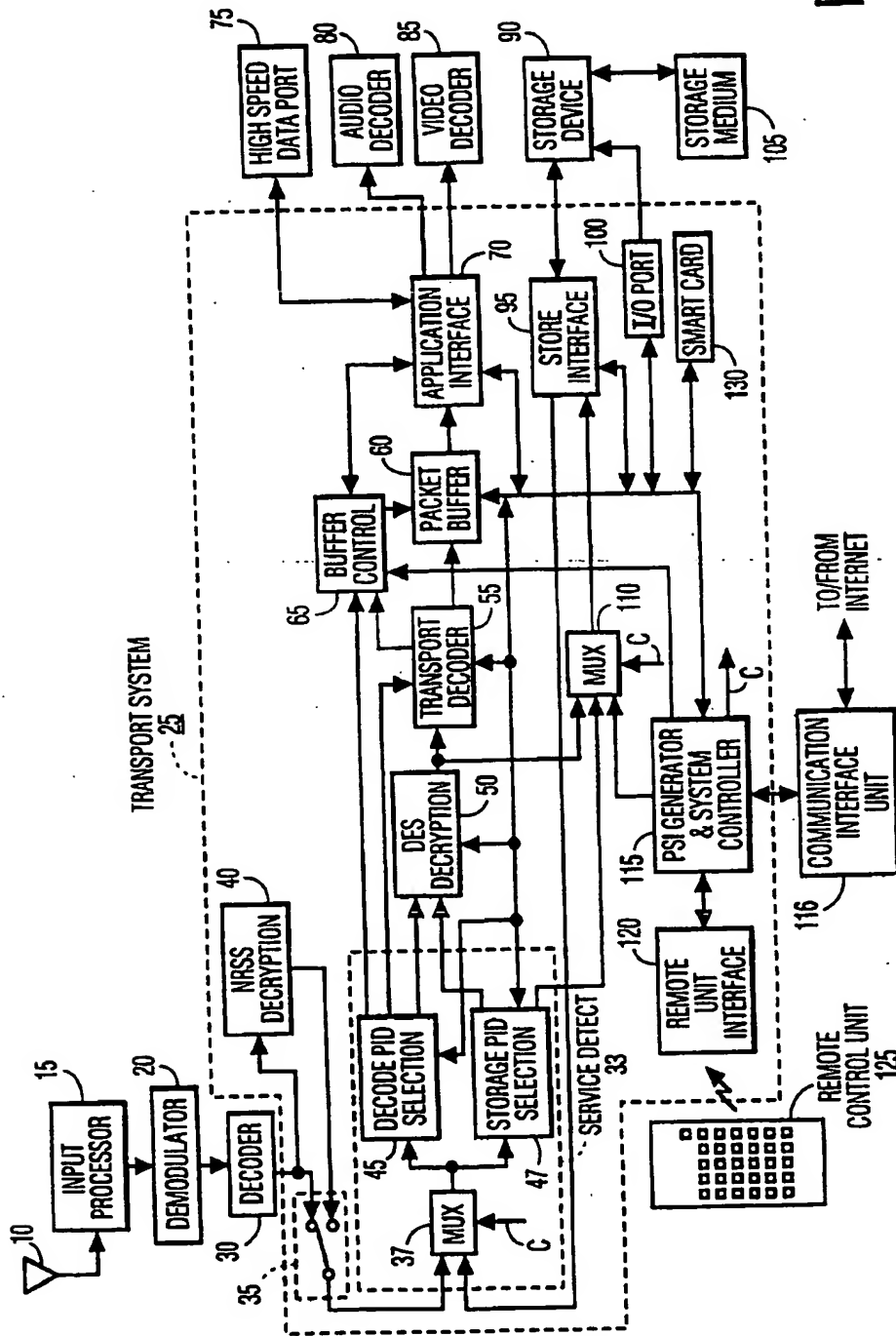


If at any point an updated guide is sent to our TV from the broadcaster, unrequested by our TV, we will bring up the banner. If we are in the process of acquiring a guide when the broadcaster pushes a new one to us, we will acquire and use the data from the new guide.

FIG. 1

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FIG. 2





3/12

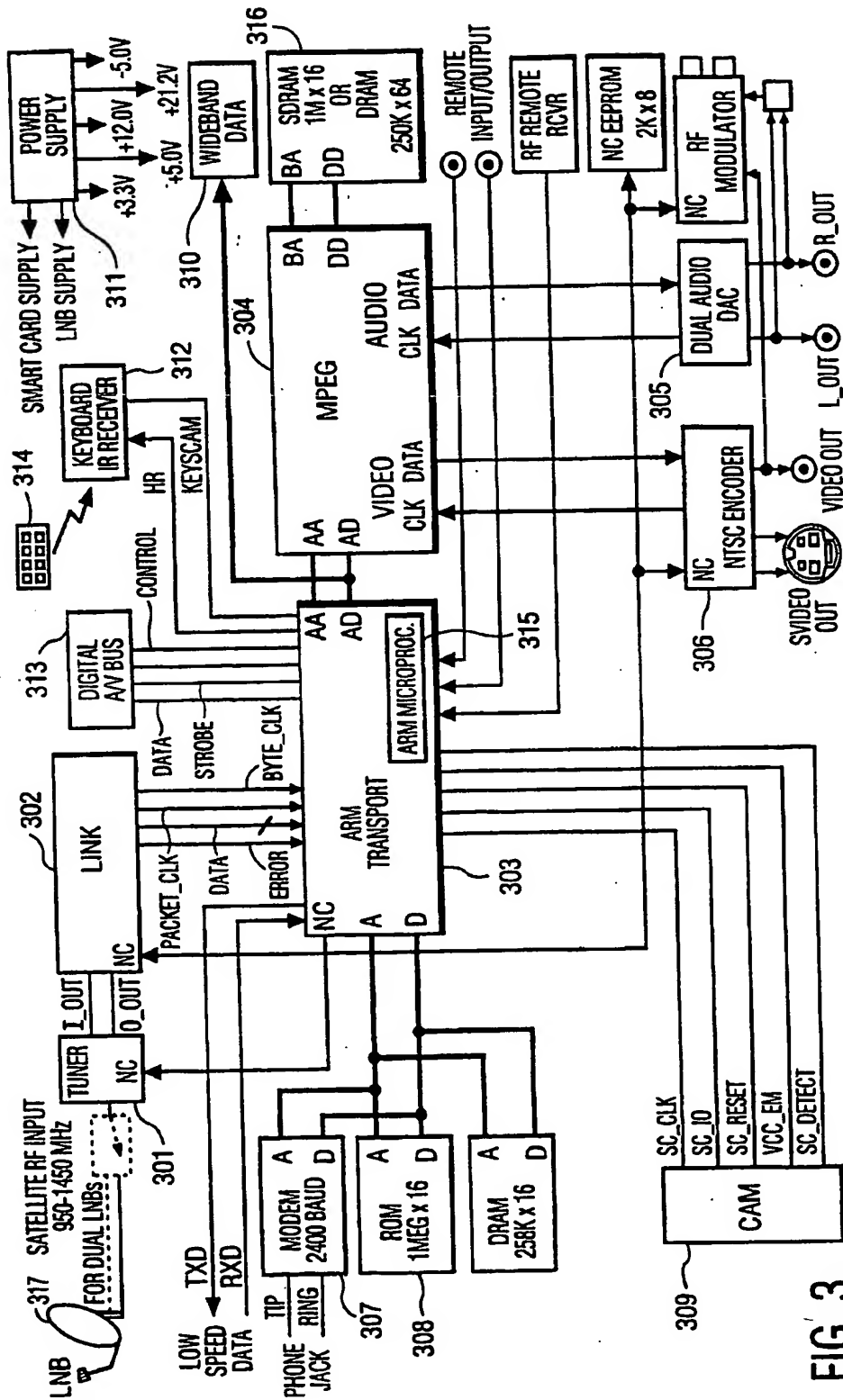


FIG. 3

# Document made available under the Patent Cooperation Treaty (PCT)

International application number: PCT/US04/036275

International filing date: 01 November 2004 (01.11.2004)

Document type: Certified copy of priority document

Document details: Country/Office: US  
Number: 60/518,218  
Filing date: 07 November 2003 (07.11.2003)

Date of receipt at the International Bureau: 06 December 2004 (06.12.2004)

Remark: Priority document submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b)



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